

DOCUMENT RESUME

ED 211 227

PS 012 602

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TITLE Attachment and Temperament Correlates of Two-Year-Olds' Reactions to Strangers.
PUB DATE Apr 81
NOTE 10p.; Paper presented at the Annual Meeting of the Eastern Psychological Association (New York, NY, April 22-25, 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attachment Behavior; *Individual Differences; *Infant Behavior; Infants; Mothers; Parent Child Relationship; *Personality Traits; Problem Solving; *Stranger Reactions

ABSTRACT

To investigate the relationship of differences in 2-year-old children's reactions to strangers to differences in their temperaments and their security of attachment with their mothers, a correlational study was conducted with 47 infants and their parents. In the first component of the study, both parents completed a child temperament rating questionnaire at home. The second component consisted of two separate 5-minute encounters between the infant and a female stranger who approached the child in a friendly way. From videotapes of these sessions independent raters coded each child's facial expression, vocalization, and visual and gross-motor behaviors. In the third component, mother and child participated in an assessment of the child's behavior in solving four tool-using tasks of graduated difficulty that required retrieving lures from within three types of containers using an implement such as a stick. The final two tasks were too difficult for 2-year-olds to solve alone and required the assistance of their mothers, who were instructed to help or not as they felt necessary. From videotapes of these sessions raters counted frequencies of children's compliance, help seeking, whining, frustration, and other behaviors, and also coded mothers' abilities to give emotional support and to effectively communicate strategies for solving the problems. Results are discussed.

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Attachment and Temperament Correlates
of

Two-Year-Olds' Reactions to Strangers

Elizabeth J. Baker

Abstract

Reaction to strangers of 47 2-year-olds were related to both parents' ratings of their temperaments and to ratings of the quality of attachment between mother and child made from videotapes of their interactions as they solved difficult tool-using tasks. The attachment relationship was assessed using procedures developed by Matas, Arend, and Sroufe (1978), children's temperaments using a questionnaire developed by Fullard, McDevitt, and Carey (1978), and children's responses to strangers using procedures reported by Morgan and Ricciuti (1969). Children responded more negatively and consistently as time progressed across two sessions with strangers. Ratings of temperament and attachment correlated significantly with responses to strangers, documenting for 2-year-olds theoretically predicted patterns of individual differences.

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Attachment and Temperament Correlates

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Social competence, broadly conceived as the ability to interact with both the new and the familiar people in one's life to promote mutually gratifying exchange and development, is the foundation of healthy psychological functioning. The concepts of a secure attachment and wariness of strangers, as described by Bowlby, Ainsworth, Sroufe and their associates, have been among the more heuristic in understanding the early development of social competence. In the view of these theorists, a secure attachment between primary caregiver and infant is essential for a child to learn how to explore and master both inanimate and social spheres confidently. The sensitive caregiver is central to the process by helping the infant modulate the stress of coping with new or threatening stimuli, including that of meeting strangers. From this point of view, secure children gradually grow more able to explore the world and to master the necessary developmental lessons without trauma with the knowledge that their base of support, their caregiver, will be available when needed. Children with less secure attachments to caregivers, where the pair functions less effectively together, are anxious about their base of support and tend to respond less adaptively to these stressful situations.

Temperament, or the child's behavioral style, is another variable hypothesized as having an interactive effect on the developing relationship between parents and children and thus, over time, on social competence. Thomas, Chess, and Birch (1968) have been pioneers in investigating aspects of temperament. They have documented how children's early individual differences proposed to be based, in part, on physiological differences, have an enduring influence on the parents and their interactions with

the children.

This study examined the relation of individual differences in 2-year-old children's reactions to strangers to individual differences in their temperaments and in their security with their mothers. I adapted procedures from Morgan and Ricciuti (1969) to elicit the children's responses to female strangers. To assess temperament, I asked both parents to rate their children using a detailed questionnaire (Fullard, McDevitt, and Carey, 1978). I assessed the quality of the attachment relationship using ratings from videotapes of the mothers' and children's behavior as they solved difficult tool-using tasks in a procedure developed by Matas, Arend, and Sroufe (1978).

I hypothesized broad patterns of relationships among the components of this correlational design. I predicted that the children rated as more temperamentally difficult would react more negatively to strangers. I also predicted that these children would be rated on the basis of the tool-using tasks as having a less secure attachment with their mothers. Conversely, I hypothesized that those children rated as easy-going and securely attached would be less wary of strangers. Although this study was not longitudinal and measured only concurrent behavior and observations, the hypotheses presumed that these concurrent measures reflected a history of interactions and patterned behavior as well as the current status; and though the results of this study could not document definitively the direction of relationships, they did lend support to the patterns and direction of effects documented by others.

Method

Subjects

The subjects were 47 2-year-old children and their parents. The age of the children ranged from 2 years to 2 years, 3 months. Twenty-four of the

children were female, 23 were male. The groups were roughly equivalent on demographic variables, socioeconomic status ranging from the lower-middle to the upper-middle class. Both parents filled out the temperament questionnaire at home, but only the mothers participated in the following laboratory visits. I recruited subjects by letter and phone and by newspaper advertisements and paid each family \$7.00 for participating.

Procedures and Measures

The procedure progressed in three stages. First, both parents completed the temperament questionnaire at home. The second and third components were laboratory visits spaced at 1 to 2-week intervals.

Component I: Temperament. The term "temperament" in this context refers to the behavioral style of the child in interaction with the environment as viewed by the child's parents. To measure behavioral style, I used the Toddler Temperament Scale (TTS) (Fullard, McDevitt, and Carey, 1978). This instrument elicits 97 responses to behavioral descriptions of nine aspects of temperament, variables based on the concept of temperament as developed by Thomas, Chess, and Birch (1968). A composite score, the Diagnostic Cluster, used in the correlational analyses was based on the average of both parents scores and reflected one of five clinically significant clusters of traits. For the purposes of this study, I arranged the five clusters into an ordinal scale ranging from 1, reflecting the cluster of traits describing the easy-going child, to 5, reflecting those traits describing the child with the most difficult behavioral style. I correlated the children's Diagnostic Cluster Scores with the ratings from their laboratory visits.

Component II: The Visits with the Strangers. Component II consisted of two separate visits, each a 5-minute encounter with a different female stranger. Eight female undergraduates at the University of Connecticut were

the strangers. On both visits each mother and child came to a laboratory room containing chairs for the mother and stranger and a highchair for the child. The stranger entered after the mother and child were settled and approached the child from across the room four times, talking and smiling in a quiet and friendly way. Each trial of approaching the child lasted 40 seconds. From videotapes of these sessions independent raters coded each child's facial expression, vocalization, and visual and gross-motor behavior with high reliability using a scale of 5 points ranging in valence from negative, to neutral, to positive affective expression. I derived a composite Fear Score for each visit for the statistical analyses. It was the average of the behavioral ratings across all four trials. Low scores reflected low fearfulness, high scores, high fearfulness.

Component III: The Tool-using Session. Both mother and child came a third time to a different room for the tool-using assessment. The experimenter presented four tasks of graduated difficulty that required retrieving lures from within three types of containers using an implement such as a stick. (L. Alan Sroufe provided materials to assist in replicating the tools, the procedure, and the coding criteria that are described more fully in Matas, Arend, and Sroufe, 1978.) The final two tasks were too difficult for 2-year-olds to solve alone and required the assistance of their mothers, who were instructed to help or not as they felt necessary. From videotapes of these sessions independent raters counted frequencies of children's compliance, help seeking, whining, frustration, and other behaviors. I factor analyzed these behaviors and thereby derived three composite scores: Compliant-Positive Behavior, Oppositional-Negative Behavior, and Expressed Frustration. Different independent raters reliably coded mothers' abilities to give emotional support and to communicate effectively strategies for solving the problems. The two resulting scores were Supportive Presence and Quality of Assistance.

The three sets of scores--the Diagnostic Cluster Score; the Fear Scores, one for each visit; and the Attachment Scores, three for the children, two for the mothers--were intercorrelated. My main interest was whether temperament and the quality of attachment would predict fear behavior. I was also curious, however, about what aspects of the children's behavior in the tool-using assessment might be related to temperament and how these assessments of the children might be related to the mothers' behavior.

Results and Discussion

The children responded significantly more negatively to the strangers as time progressed, both within each session and from the first to the second visit. By the second day, their responses were individually more stable and showed more variability across the group. Neither boys nor girls were more fearful of strangers. Compared to 1-year-olds reported on by Morgan and Ricciuti, the 2-year-olds gave more neutral responses and fewer positive or negative ones. Thus, as a group these older children responded more stably but also less fearfully and less positively than infants studied previously.

Ratings from the temperament questionnaire and the tool-using tasks both predicted significantly to the children's responses to strangers in the hypothesized directions. I used the average of both parents' ratings of temperament in the data analyses. Children rated as more difficult in temperament were more fearful of strangers than those rated as more easy-going. Children rated as expressing more frustration while solving the tool-using tasks also were more fearful. Those children who were fearful at the second visit were also more likely to have mothers who were rated lower on emotional supportiveness and on giving effective assistance. (See Table 1.)

The correlations in Table 2 were of interest because they helped clarify differences among the group of children. Oppositional behavior was not so highly related to temperament as compliant behavior and expressing frustration.

Oppositional behavior was most highly related to poor abilities of the mothers to give support and effective help. Again referring to Table 1, one can see that oppositional behavior also predicted fear better on Visit 2 than on Visit 1. Expressing frustration, the children's behavior most highly predictive of fear, was highly related to temperament and less highly related to the quality of the mothers' behavior. Though this study cannot tease out subtle aspects of the mother-infant relationship that may contribute to or enhance the difficultness in the children, and though these interpretations can only be speculative, those children who were more fearful, rated as more difficult in temperament, and more expressive of frustration may be constitutionally more reactive than the oppositional children. For the oppositional children, whose constitutions may be more hardy, poor mothering did seem related to their inability to deal with the stress of the procedure with strangers over time. The compliant, cooperative children, who were not fearful as a group, apparently were blessed with hardy constitutions and good mothering.

These results, then, are congruent with theories of attachment and wariness of strangers and with accumulating evidence that antecedents of attachment and temperament have interacting and enduring effects. The increasing consistency in the children's responses over time suggests that children need time to evaluate the situation. Thus, the children's learning, remembering the first visit, and prior expectations played a role in their responses to the strangers. Although no direction for the effects can be documented in this study, the results support a hypothesis elaborated by Ainsworth and by Sroufe: children with less secure attachments to caregivers are anxious about their base of support and tend to respond less adaptively in engaging new experiences, particularly stressful situations like a stylized encounter with a stranger.

Table 1

	<u>Fear Scores</u>		
	Visit 1	Visit 2	Both Visits Combined
Diagnostic Cluster Score	.30*	.28	.32*
<u>Tool-using Tasks:</u>			
Frustration Behavior	.46***	.36*	.44**
Oppositional Behavior	-.14	.17	.05
Compliant Behavior	.13	-.01	-.05
Supportive Presence	-.01	-.28	-.19
Quality of Assistance	-.04	-.37**	-.27
Mother Quality (Mother variables combined)	-.02	-.34*	-.24

Note. All correlations are based on $N = 47$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

	D.C.	F.B.	O.B.	C.B.	M.Q.
Diagnostic Cluster Score		.42**	.32*	-.47***	-.24
Frustration Behavior			.30*	-.38**	-.39**
Oppositional Behavior				-.52***	-.53***
Compliant Behavior					.44**
Mother Quality					

Note. All correlations are based on $N = 47$. * $p < .05$. ** $p < .01$. *** $p < .001$.

References

- Fullard, W., McDevitt, S., & Carey, W. Toddler Temperament Scale. Copyright, 1978. (Available from William Fullard, Department of Educational Psychology, Temple University, Philadelphia, Pennsylvania 19122.)
- Matas, L., Arend, R. A., & Sroufe, L. A. Continuity of adaptation in the second year: the relationship between quality of attachment and later competence. Child Development, 1978, 49, 547-556.
- Morgan, G. A., & Ricciuti, H. N. Infants responses to strangers during the first year. In B. M. Foss (Ed.), Determinants of infant behavior, Vol. IV. London, Methuen, 1969.
- Thomas, A., Chess, S., & Birch, H. Temperament and behavior disorders in children. New York: New York University Press, 1968.